The Behavior Analyst 1991, 14, 219–224 No. 2 (Fall)

Are Moral Considerations Sufficient for Selecting Nonaversive Interventions?: A Review of Repp and Singh's *Perspectives on the Use of Nonaversive and Aversive Interventions for Persons with Developmental Disabilities*

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Applied behavior analysis is in the midst of a controversy which significantly affects its public image, potential avenues of research, and future clinical practices. This controversy concerns the use of punishment based interventions and their abandonment in exclusive favor of those labeled as nonaversive procedures. The underlying issue appears to be that while the use of nonaversive procedures may be ethically necessary, they may not be sufficiently powerful for control of some severe forms of maladaptive behavior. As this debate progresses two features become clear. First, there are professionals of good will on both sides who are in many instances speaking past each other along moral versus scientific arguments. Second, questions crystallize for which insufficient data based answers are available, thereby providing an agenda more suitable for research than for debate.

A variable fueling this debate is the word punishment and its often interchangeable use with the adjective "aversive." The outcome based definition of punishment by Azrin and Holtz (1966) is widely accepted in applied behavior analysis: "a reduction of the future probability of a specific response as a result of the immediate delivery of a stimulus for that response" (p. 381). Punishment is thus defined by its effect on behavior. It neither requires, nor necessarily implies, the delivery of stimuli which induce pain or distress, as the term aversive can imply. Therefore, the two words should not be automatically paired.

Accepting this definition, confusion is added when participants in this debate use "aversive" in various ways. As noted by Horner et al. (1990), some apply aversive to any stimulus which is followed by escape or avoidance, while others use it synonymously with procedures involving the delivery of pain, withholding basic human needs, or social humiliation. Acknowledging the difficulty in technically or consistently ascribing stimuli as aversive or nonaversive, the adjective should be applied to a set of stimuli with the potential of physical harm. This is congruent with statements of advocacy groups which would proscribe the use of such procedures. For example, the Association for Retarded Citizens (ARC) includes food deprivation, inflicting pain, and chemical restraint. The American Association on Mental Retardation (AAMR), The Autism Society of America (ASA), and The Association for Persons with Severe Handicaps (TASH) also include tissue damage, physical illness, and severe physical or emotional stress. The phrase influencing some debate is by The Association for Persons with Severe Handicaps (1986): "dehumanization of persons with severe handicaps because the procedures are normally unacceptable for persons who do not have handicaps in community environment." Interpreting this, some would exclude use of what have come to be described as "mild" aversive procedures such as water mist, momentary restraint, and various timeout procedures.

In the absence of data, questions arise

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about the use of both aversive and nonaversive procedures. What of cases where etiology is not environmentally learned, but rather physical or genetic? What is the treatment for internally motivated or controlled behavior, for which nonaversive procedures have seldom shown to be effective? How is analysis conducted for behaviors which serve multiple functions? What are the criteria for determining when a nonaversive procedure is not effective and should be terminated? Can we accept that one never gives up on nonaversives when a child is doing serious damage? A response that the procedure is not being implemented correctly rings hollow in the absence of data.

A key variable in this debate is that increasing numbers of individuals with severe maladaptive behaviors and developmental disabilities are in the public schools. Best practice for these students is community-based instruction. Therefore, there is a need for conducting research within the restrictions of the public schools and community settings with their multiplicity of intervening and confounding variables. For its findings to be put into practice, research in these settings should be conducted with a full class of students and with the teacher as primary intervenor rather than an outside experimenter as primary intervenor. Studies should include longitudinal details of what was done following initial intervention to maintain control in school, home, and community settings where there are different variables, contingencies, and intervenors.

As this debate continues, we should not condemn the good faith use of current knowledge. The strident tone of some may result in teachers and parents turning a deaf ear. Evidence of this may be seen in the latest ASA election where, in part, a majority gathered around opposition to "the adoption of an unscientific ideologically-based antiaversive resolution" (Simpson, 1991, p. 1). Simple prohibition of a range of procedures is not congruent with the difficult and complex issues faced. The professional and moral obligation of applied behavior analysts is to speak from a coherent database. This debate will be settled through research which provides teachers and parents with the analytic tools which will enable them to individualize intervention, rather than operating from generalized claims about classes of interventions.

OVERVIEW

The complexities of treating severe behavior problems are brought forth in A. Repp and N. Singh's *Perspectives on the Use of Nonaversive and Aversive Interventions for Persons with Developmental Disabilities.* This book immerses the reader in the many issues surrounding the use of aversive and nonaversive interventions. Sixty authors, noted for their work with persons with severe problem behaviors, contributed the 33 chapters. Their positions range from those who support exclusive use of nonaversive procedures, to others who support the use of aversive procedures only as a last resort.

The first sections address "Myths, Ethics, and Science" and "Treatments." Donnellan and LaVigna propose that severe behavior problems are learned and can be effectively changed with nonaversive techniques. They cite what they consider myths, such as the necessity of punishment and its being easier to administer than other treatments. The authors state that professionals have not emphasized positive reinforcement enough in research or in training service providers. Axelrod challenges the "mythology" that aversives are not normal and should not be used with people with disabilities. He states that aversive procedures are a part of everyday life for all people. He also challenges the effectiveness of reinforcement procedures based on research and on clinical experience. Having experienced the death of a client, due to self-injurious behavior, while alternative treatments were being tried, Axelrod states "there is harm in failing" (p. 62). Luiselli's position is also that professionals have a bias towards using aversives in controlling severe behavior problems.

He discusses recent developments in support of nonaversive techniques, including functional assessment, intervention, and equivalence. Rather than banning the use of aversives, Luiselli states "to reject categorically particular procedures severely limits therapeutic options and the opportunity to improve the quality of life through the judicious, balanced, and ethical application of empirically validated methods" (p. 83).

Principles of behavioral interventions discussed by Schroeder, Oldenquist, and Rojahn include utilitarianism, rights, and reciprocity. They point out that practitioners must not lose subjectivity, such that they become "jaded" to dehumanizing treatments. Researchers have begun comparing the effectiveness of procedures using criteria which include: (a) degree, rapidity, and durability of suppression; (b) generalization; and (c) social validity.

Rolider and Van Houton specifically address DRO, viewed by some as a reinforcement procedure, even though the reinforcement is contingent on the absence of the misbehavior, therefore decreasing the misbehavior, rather than increasing the occurrence of a specific response. These authors recommend teaching functional behaviors through the use of reinforcement and using punishment for the inappropriate behaviors, only if the functional behaviors did not replace the inappropriate ones.

Attempts in finding a middle ground are found in models presented by Wolery and Gast, and by Feldman. Wolery and Gast present a model in which the conditions of aversive procedures are identical to those under which nonaversive procedures could be employed. Feldman's model maintains the least restrictive treatment alternative and preventive approaches, with aversive procedures as part of a larger treatment program which includes safeguards and reviews. Both models have similar components of appropriate safeguards, motivational assessment, adaptive behaviors, competent professionals, and peer review.

Freagon writes that professionals have the moral obligation to insure that persons with disabilities have equal rights and protection. She proposes infant, toddler, and early childhood programs as preventive measures for maladaptive behaviors. Dunlap, Johnson, and Robbins also propose early intervention programs with an emphasis on functional skill building, focusing on communication and social interactions, as an attempt to eliminate or prevent maladaptive behaviors. They point out that early intervention programs require the involvement of transdisciplinary services. They strongly oppose the use of aversive procedures: "The use of severe punishment or aversives needs to be defined as abuse, just as it is defined as abuse when applied with people without disabilities' (p. 154).

From an empirical and philosophical position, Guess also writes of his opposition to the use of aversive procedures. His recommendations include: professionals forthrightly taking a position on aversive technology, establishing guidelines for reporting research findings, and establishing a multi-paradigmatic and cross discipline effort in treating severe behavior problems. Having done his own introspective process concerning the issue of aversive treatments, Guess urges professionals to conduct their own introspection.

Paisey, Whitney, and Hislop emphasize the complexity involved in conducting a functional analysis for behaviors which have multiple controlling variables. Additionally, the skills used with nonaversive procedures are often more difficult to maintain in other settings, especially when partial suppression of the behavior is achieved. The authors discuss circumstances warranting the use of aversive treatments, ranging from "when there is significant risk of injury associated with emission of even a single response," to "multiple aberrant response topographies" concurrently being emitted (p. 192).

Employing the techniques of Gentle Teaching, Barrera and Teodoro found that self injurious behavior was not rapidly eliminated. They point out that the

failure of Gentle Teaching is not in its treatment delivery, but rather in its methodological and conceptual approach (p. 210). They discuss that the strength of Gentle Teaching is that it teaches care providers how to cope with the chronicity of developmental disabilities. Jones, Singh, and Kendall compared Gentle Teaching with visual screening. They found few significant differences in the two treatments for one client. However, for the other client neither treatment was effective. They concluded that effectiveness is dependent on the motivational factors for the maladaptive behavior (p. 226). These authors state that Gentle Teaching will be most successful with socially motivated behaviors, as opposed to those which may be produced by interoceptive perceptual reinforcers or those neurobiologically based (p. 227). As a result of their study, McGee and Gonzalez state "tentative support exist that Gentle Teaching effectuates substantial change in the caregivers and persons with behavioral difficulties" (p. 249). Gentle Teaching is inclusive of behavioral techniques, with an emphasis on human valuing, interdependence, and value based actions.

Birnbrauer suggests choices professionals have regarding aversive procedures: to use aversives correctly or to pretend they do not exist, and to determine the type of punishment to be used and for whom. He also states, "we should cease behaving as if caretakers have boundless supplies of time, energy, and resistance to extinction and punishment" (p. 233). The optimal approach proposed by the author is to provide careful instruction in reinforcement to caretakers in a social environment conducive to maintaining appropriate behavior.

Butterfield delineates among damaging, harmful, and aversive treatments: damaging to mean physically injurious, harmful to mean socially or psychologically impairing, and aversive to mean unpleasant or painful (p. 255). He suggests research continue until the efficacy for treating specific behavior problems is established. Further, when there are no valid data to direct clinical practice, treatments should be used in accordance with established rules of science, rather than ideological arguments which deny certain treatments for severe behaviors which have not been responsive to nonaversive treatments.

The section on "Functional Analysis" begins with a chapter by Iwata, Vollmer, and Zarcone. These authors ask whether treatments based on a functional analysis are more effective than those selected by other methods. Problems associated with functional analysis are discussed: (a) the risk associated with the necessity to reinforce target behaviors during assessment, (b) multiply controlled behaviors requiring multiple treatments that vary across situations, and (c) the subjectivity implied in use of restrictive interventions placed in a hierarchical form. They discuss challenges to effective treatment including using gradual techniques and inconsistent treatment which increase resistance to treatment.

Repp and Karsh suggest three environmentally dependent hypotheses: negative reinforcement, positive reinforcement, and stimulation. The authors state that "effective treatments can be implemented if a taxonomy is used to identify the functional relationship among the maladaptive behavior and conditions, events, or stimulus–response relationships in the environment" (p. 341). Pyles and Bailey suggest seven Behavioral Diagnostic Categories (e.g., self stimulation, escape from demands, medication side effects). They describe this approach as requiring new conceptualizations of issues such as when to intervene, chronicity of behavior problems, and treatments for those not benefiting from skill training. Wacker, Steege, Northup, Reimers, Berg, and Sasso describe three outpatient components: direct observation using a functional analysis and replication, contingency reversal, and acceptability to intervenors. They state that this treatment package is successful with about half of the clients. For persons for whom this treatment plan is unsuccessful, variables to consider are the length of time the be-

haviors existed prior to treatment and constant application of treatment.

Carr, Robinson, and Palumbo approach the issue of aversive procedures from a functional versus nonfunctional treatment perspective. The central issue being what the client is doing when not exhibiting maladaptive behaviors. They describe four differences in these treatments: (1) Functional treatment is based on a functional analysis; nonfunctional treatment emphasizes technology and can be aversive or nonaversive. (2) Functional treatments are proactive while nonfunctional treatments are reactive. (3) The purpose of functional treatment is to teach or increase socially desirable responses; nonfunctional treatments are for crisis management. (4) Functional treatment is educational and continuous; nonfunctional treatment is short term and is completed when the crisis is under control.

Schrader and Gaylor-Ross propose a Triadic model which includes: ecological/antecedent changes, curricular interventions, and contingency-based interventions. With advances in nonaversive technology, the authors propose that there should be an increase in the number of individuals who benefit from these interventions. They suggest stringent certification for professionals who will be responsible for administering aversive procedures. "The abusive nature of aversive procedures must be balanced against the right to receive treatment" (p. 413).

The fifth section, "Basic and Applied Research," opens with Sobsey's research review of aversive procedures. To these studies he applied Skinner's six criteria for the use of punishers, and found they were seldom adhered to. He suggests that if these criteria are not met, there is little justification for the use of aversive procedures. Further, he can find little support that aversive procedures are superior to nonaversive ones. Linscheid and Meinhold state that negative side effects associated with aversive treatments in laboratory settings cannot be generalized to clinical settings.

The complex relationships controlling operant behavior are discussed by Epling and Pierce. Much of their discussion concerns predicting rates of problem behavior based on the matching law: "Relative behavior or time matches the relative rate of reinforcement. A source of reinforcement is called an alternative. A person distributes responses in accord with the relative, rather than the absolute, rate of reinforcement from an alternative" (p. 456). According to Epling and Pierce, when a problem behavior is targeted, the principle of choice, which is the basic element of the matching law, determines the success of the behavior modification procedures.

Coe and Matson's view, based on the research, is that a combination of aversive and nonaversive techniques is more effective than nonaversive techniques alone. They suggest more group studies in an effort to include the controlling variables, efficacy of treatments, and generalizability of results. To state that enough evidence exists to support the use of nonaversive interventions only is "a gross exaggeration of the situation, and at worst, it is academic and professional dishonesty" (p. 473).

In the final section, "Treatment Providers," based on the tenets of weak research evidence, lack of knowledge of a range of etiological factors, and issues of social validation, Lutzker concludes that there are insufficient data to justify the use of aversive procedures. He states that there are too few safeguards to insure application of aversive procedures in a conscientious, ethical manner. "The surest prevention of abuse of aversive procedures is not to equip parents, teachers, and care providers with these techniques in the first place" (p. 498).

O'Brien and Karsh address the aversive treatment issue from the perspective of treatment acceptability. They warn that most research on aversive procedures has been conducted with persons with mild or moderate developmental disabilities and should not be generalized to those persons with severe or profound disabilities. According to the authors, treatment acceptability may be influenced by fac-

tors yet to be identified, such as institutional policies, practicality, or the attitudes towards persons with developmental disabilities.

COMMENTS

With this book Repp and Singh have brought the debate concerning use of aversive and nonaversive intervention with developmentally disabled persons from public media forums such as *20/20* and *Nightline* to a thoughtful professional format. The authors provide an unbiased forum for discussants on each side of the issue, allowing the reader an appreciation of the complex and diverse moral and scientific stances. The authors represented are eminent spokespersons and researchers in the fields of applied behavior analysis and developmental disabilities.

While this book is of considerable length—given the controversies within professional organizations—the use of aversive and nonaversive treatments cannot, and should not, be written about succinctly. The various positions are presented in a style appropriate for basic and applied researchers, service providers, and teacher educators—informing and immersing each constituency in the complex facets involved with the use of aversive treatments. Professional content is written so that the person new to the issue, or one intimately involved, will gain new information and understanding. The assignment of more than selected chapters may be overwhelming for a basic course. However, this book's analysis of professional ethics and research make it an excellent text for an advanced seminar.

The reader looking for resolution will be disappointed. A comprehensive representation of views with a wide range of moral questions, research criticism, and analysis models is presented. Within the array of chapters, the preponderance of writing is from a clinical perspective, highlighting a weakness of this debate. The discussion, analysis, and research should follow disabled persons into public schools and community settings. A significant strength of the book consists of the research critiques applied to both sides, such as Sobsey's review of aversive research and Coe and Matson's review of nonaversive research. These reviews clearly stress the need for rigorous, peer reviewed research on nonaversive procedures, and the need for more controlled and applied research on aversive procedures. Research which so intimately involves the lives of children should not be open to challenges of the rigorous application of scientific standards.

Another strength is that ethics and science are juxtaposed in a thought provoking fashion. Implied is the question as to whether they can be viewed independently. This book encourages the reader, as explicitly stated in chapters by Repp and Guess, to engage in professional and personal self-evaluation concerning the blending of moral imperatives and databased knowledge. As Repp writes, he hopes the reader is both informed and challenged to consider currently held beliefs. And indeed one is.

The seeds for a sound and ethical resolution for intervention guidelines can be found within the arguments presented by both sides. Such guidelines can be achieved through what we see as the best use of this book: a research agenda for the debate, giving full consideration to the moral issues raised.

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